

Attorney Docket No. NC17514
Client Matter No. NOKI02-17514

channel path, an improvement of apparatus for verifying values indicative of the first weight and the second weight, said apparatus comprising:

a sequence estimator coupled to receive indications of a transmitted portion of the communication signal, once received at the second communication station, said sequence estimator for estimating estimated values of the first weight and of the second weight by which the transmitted portion of the communication signal is weighted, the estimated values formed by said sequence estimator selected responsive to both a memory component and a current component, the estimated values verifying the values indicative of the first weight and the second weight.

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2. (Amended) The apparatus of claim 1 wherein the current component responsive, in part, to which said sequence estimator selects the estimated values of the first weight and of the second weight comprises most-recent values indicative of the first and second weights.

3. (Amended) The apparatus of claim 2 wherein the memory component responsive, in part, to which said sequence estimator selects the estimated values of the first weight and of the second weight comprises at least one set of values indicative of the first and second weights prior to the most-recent values.

Attorney Docket No. NC17514
Client Matter No. NOKI02-17514

4. (Amended) The apparatus of claim 3 further comprising a detector positioned at the second communication station, said detector for detecting indicia of the transmitted portion of the communication signal communicated to the second communication station.

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5. (Amended) The apparatus of claim 4 wherein said sequence estimator comprises a trellis matrix, the trellis matrix defining a plurality of states, each state formed of allowable values of the first and second weights.

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11. (Amended) The apparatus of claim 1 wherein the communication system comprises a radio communication system which utilizes WDCMA (wideband code division multiple access) communication techniques and wherein the values to which said sequence estimator is coupled to receive indications thereof comprise values of the first and second antenna weights, respectively, indicative of weightings by which to weight a WCDMA signal which forms the communication signal.

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13. (Amended) The apparatus of claim 12 wherein the indications of the values to which said sequences estimator is coupled to receive are representative of closed-loop values when received at the mobile station.

Attorney Docket No. NC17514
Client Matter No. NOKI02-17514

14. (Amended) the apparatus of claim 12 wherein the estimated values formed by said sequence estimator are used by the mobile station to decode the transmitted portion of the communication signal.

15. (Amended) In a method of communicating in a communication system having a first communication station for communicating a communication signal to a second communication station, the communication signal weighted at the first communication station with a first weight for communication to the second communication station by way of a first channel path and weighted at the first communication station with a second weight for communication to the second communication station by way of a second channel path, an improvement of a method for verifying values indicative of the first weight and the second weight, said method comprising:

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detecting, at the second communication station, indications of a transmitted portion of the communication signal, once received at the second communication station;

estimating estimated values of the first weight and of the second weight by which to weight the communication signal is weighted, the estimated values selected responsive to both a memory component and a current component, the estimated values verifying the values indicative of the first weight and the second weight.

Attorney Docket No. NC17514
Client Matter No. NOKI02-17514

16. (Amended) The method of claim 15 wherein the current component of the estimated values estimated during said operation of estimating comprises most-recently detected values detected most-recently during said operation of detecting.

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17. (Amended) The method of claim 16 wherein the memory component of the estimated values estimated during said operation of estimating comprises at least one set of values indicative of the first and second weights prior to the most-recent values.
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18. (Amended) The method of claim 17 wherein said operation of estimating comprises:
forming a trellis matrice defined by a plurality of states, each state formed of allowable values of the first and second weights, and
forming a maximum length branch metric therethrough.

19. (Amended) The method of claim 15 wherein the values indicative of the first and second weights, indications of which are detected during said operation of detecting, are communicated to the second communication station by the first communication station and comprise pilot symbols.